

Title (en)
Self-energising disc brakes.

Title (de)
Selbstverstärkende Scheibenbremsen.

Title (fr)
Freins à disque à autoserrage.

Publication
EP 0361864 A1 19900404 (EN)

Application
EP 89309789 A 19890926

Priority
GB 8822764 A 19880928

Abstract (en)
A compound disc brake comprises a pair of pressure plates (7, 9) with a ball and ramp camming mechanism, one of the plates comprises a driven plate (7) keyed to a rotating axle shaft (5) to be braked, and the other plate comprises an input plate (9) carried from the driven plate by the camming mechanism. The input plate 9 is of larger diameter than the driven plate with its radially outer region comprising torque-transmitting mechanism (16) which transmits torque applied to that region by primary braking means (6), which can be a spot brake, to the central region of the input plate (9). Retardation of the input plate by the primary braking means causes the pressure plates to separate axially and move into engagement with relatively stationary braking surfaces (2, 3) in brake housing 1 whereafter servo braking occurs. Various multi-plate embodiments are disclosed, including embodiments in which the torque-transmitting mechanism (16) is a separate annular disc (31, 60, 73) keyed to the outer peripheral edge (15) of the servo plate. Other modifications of the pressure plates are also disclosed.

IPC 1-7
F16D 55/14; F16D 55/15; F16D 65/853

IPC 8 full level
F16D 55/24 (2006.01); **F16D 55/14** (2006.01); **F16D 55/15** (2006.01); **F16D 65/14** (2006.01); **F16D 65/853** (2006.01)

CPC (source: EP US)
F16D 55/14 (2013.01 - EP US); **F16D 55/15** (2013.01 - EP US); **F16D 65/853** (2013.01 - EP US); **F16D 2125/36** (2013.01 - EP US)

Citation (search report)
• [X] GB 1005382 A 19650922 - AUTOMOTIVE PROD CO LTD
• [X] US 2256725 A 19410923 - PIERCE EARL R, et al
• [A] EP 0040027 A1 19811118 - LUCAS IND PLC [GB]
• [A] EP 0128758 A1 19841219 - LUCAS IND PLC [GB]
• [A] FR 2603355 A3 19880304 - LUCAS IND PLC [GB]
• [AD] US 3403753 A 19681001 - HOOTEN ROBERT L

Cited by
FR2864594A1; EP0530155A1; EP1231401A3; EP0482803A1; US7000741B2; US6715589B2; WO2008047072A1

Designated contracting state (EPC)
DE FR GB IT

DOCDB simple family (publication)
EP 0361864 A1 19900404; EP 0361864 B1 19930519; BR 8904886 A 19900508; DE 68906627 D1 19930624; DE 68906627 T2 19930902; GB 8822764 D0 19881102; JP H02168034 A 19900628; PL 161213 B1 19930630; US 5012901 A 19910507

DOCDB simple family (application)
EP 89309789 A 19890926; BR 8904886 A 19890927; DE 68906627 T 19890926; GB 8822764 A 19880928; JP 25368589 A 19890928; PL 28161789 A 19890928; US 41170889 A 19890925